REMARKS

The application has been amended.

The specification has been amended to add section headings.

New claims have been added, reciting features of the invention as originally disclosed and patentably reciting the invention.

The claims have been amended to address the bases for rejection under section 112, second paragraph. Withdrawal of this rejection is solicited.

Claims 1-3 and 6 were rejected as anticipated by TERRY et al. 5,981,010 ("TERRY").

Claims 4-5 were rejected as obvious over TERRY in view of GB 1314352 (GB '352).

The invention, as claimed, is a sealing membrane having a high stability to UV exposure. See specification page 3, line 32.

Additionally, the inventive sealing membrane includes a modified bituminous binder adapted to be softened by heat and to regain its properties after cooling. See specification page 4, lines 23-26.

TERRY belongs to the family of PCT No. WO 97/03253 and is discussed on specification page 3. The drawbacks and limitations of this membrane are addressed, as well as the

improvements the present invention adds over this prior art. See the below three reproduced paragraphs:

> From the document WO 97/03253 is known a sheet material forming a barrier against moisture and comprising a layer of a mixture of bitumen/polyurethane spread on a polymeric film and covered with a detachable film.
>
> The polymer film ensures protection of the bituminous layer against external agents, particularly against UV, and said bituminous layer has the properties of cold adhesivity and does not need to be reheated before application of the sheet material.
>
> The problem solved by the present invention consists in providing a prefabricated sealing membrane based on modified bituminous binder, that can be produced in an industrial manner according to the current techniques of spreading or impregnation, such as calandering (if desired slightly modified), adapted to be softened by heating before emplacement without modification of its characteristic, having a high stability against UV (ultraviolet) and a high resistance to oxidation and aging and being exposed to atmospheric and climatic aggressive agents.

TERRY is based on the use of a super polyol compatible with bitumen, namely the polybd (polybutadiene). However, because of its chemical composition (double bond carbon-carbon), this polyol is absolutely not resistant to UV, from which arises the requirement of the use of a supplemental protection against radiation in the form of a film (LDPE film).

Additionally, the functionality of this polybd (polybutadiene) is comprised between 2.2 and 2.6, which confers a ***thermosetting*** character to the included bituminous binder (in opposition to the ***thermoplastic*** character of the invention's

modified binder). Thus, TERRY's bituminous binder exhibits thermosetting character and not thermoplastic character.

Thus, TERRY has a modified bituminous binder which integrates this polyol of the (crosslinked) polybutadiene type, and which binder will not soften in the case of reheating and will not recover all of its characteristics after subsequent cooling.

GB '352 relates to bituminous products containing preferably more than 5% of polyurethane and up to 10% of polyurethane (while the invention's bituminous binder comprises 10 to 50% of polyurethane).

GB '352 moreover teaches a preferred range between 5 and 8% polyurethane and is a matter accordingly of a thermosetting type polyurethane (not thermoplastic as in the present invention). Thus, the GB '352 has the same disadvantages as the TERRY reference. The teaching of GB '352, even if integrated into TERRY, would result in a thermosetting type material and not a thermoplastic material as recited.

Each of the references teaches thermosetting bituminous compositions and neither teaches a thermoplastic bituminous composition. Therefore, there is no motivation to move toward composition ranges that would result in the recited thermoplastic material of the present invention.

Thus, the invention is believed patentable because neither reference teaches a thermoplastic bituminous composition.

Additionally, applicants do not see that the references teach or suggest the use of a thermoplastic polyurethane comprising a diisocyanate, a polyol, and a chain lengthening agent, where the thermoplastic polyurethane molecules free of double carbon-carbon bonds, the polyols are free of ethylene linkages, the functionality of the polyols is between 1.95 and 2.05, and the functionality of the isocyanates is between 2.0 and 2.1.

Applicants do not see a teaching of the further recitations of claims 17-18, i.e., wherein a ratio of isocyanate/polyol is between 1.0 and 1.1 or about 1.05.

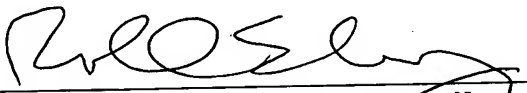
In view of these differences, the claims are believed allowable.

Reconsideration and allowance of all the claims are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



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